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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/503,022	02/14/2000	Vladislav Boutenko	14XZ00055	6021

7590 02/10/2006

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EXAMINER

CHOOBIN, BARRY

ART UNIT	PAPER NUMBER
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2623

DATE MAILED: 02/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/503,022	Applicant(s) BOUTENKO ET AL.	
	Examiner Barry Choobin	Art Unit 2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 10 is/are rejected.
- 7) ☒ Claim(s) 4-9 and 11-14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings were received on 1/18/2006. These drawings are approved.

Response to Arguments

2. Applicant's arguments with respect to claims 1-3 have been considered but are moot in view of the new ground(s) of rejection.

Currently claims 1-14 are pending.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Florent (US 6,151,417) in view of Florent et al (US 6,154,519).

As to claim 1, Florent discloses a method of treatment of a sequence of x-ray images of a body, comprising', acquiring an image sequence including a current image and a preceding image, elaborating for each acquired current image of a current filtered image from the acquired current image and from the preceding filtered image (Fig 1A.,

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and column 3, Lines 33-54) and visualizing of the filtered image sequence, wherein for each acquired current image a displacement of the current image is determined relative to the acquired preceding image in an image acquisition plane, the displaced preceding filtered image is elaborated by spatially displacing the preceding filtered image, taking the displacement of the current image into account, and the current filtered image is elaborated by the weighted average between the acquired current image and the displaced preceding filtered images so as to improve the quality of the images visualized (see abstract).

Florent fails to explicitly disclose applying a displacement vector to the preceding filter image, thereby defining a displaced filtered image.

Florent et al (US, 519) disclose an image processing method for motion estimation in a sequence of images comprising applying a motion (displacement) vector to the preceding filter image (column 4, lines 62-67).

Florent and Florent et al are combinable because they are from same filed of endeavor of medical image processing in particular processing images in a sequence.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the work of Florent with the teaching of Florent et al in order to enhance the effectiveness of motion estimation in the sequence of images (column 2, lines 9-18).

The suggesting/motivation for doing so would have been to enhance the effectiveness of motion estimation in the sequence of images.

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Therefore, it would have been obvious to combine the Florent with Florent et al (US, 519) to obtain the invention as specified in claim 1.

As to claim 2, Florent discloses the method according to claim 1 (see claim 1, above), in which the body is Laid on a movable table, wherein the displacement of the current image is determined in the image acquisition plane from the value of displacement of the table and spatial orientation and distance of the acquisition plane relative to the table (fig. 1a).

As to claim 3, Florent discloses the method according to claim 1 (see claim 1, above), wherein the displacement of the current image is determined in the image acquisition plane from the content of the acquired images (see fig.2a).

As to claim 10, the limitations of this claim are addressed in claim 1 above. However, the additional limitation of displaying image sequence including a current image and a preceding image is thought by Florent at column 2, lines 34-38.

Allowable Subject Matter

4. Claims 4-9 and 11-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

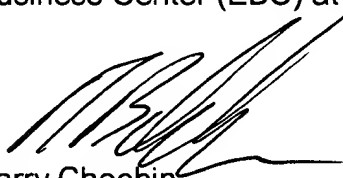
CONTACT INFORMATION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Barry Choobin whose telephone number is 571-272-7447. The examiner can normally be reached on M-F 7:30 AM to 18:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MATTHEW BELLA can be reached on 571-272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 800-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Barry Choobin', is written over the printed name.

Barry Choobin
2/9/06